

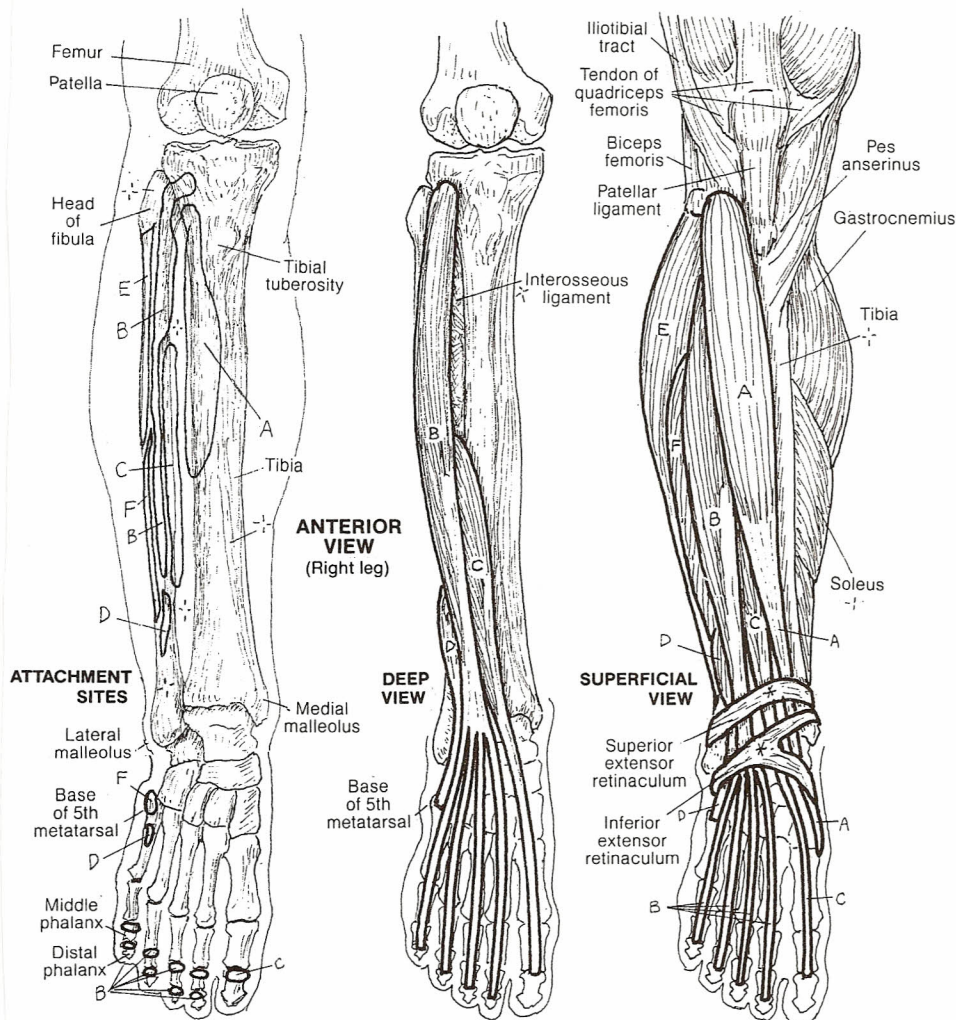
MUSCLES OF THE ANTERIOR & LATERAL LEG

CN: Take care with the narrow attachment sites of the anterior leg. Although the muscles A, B, and C arise from the interosseous ligament as well as the tibia and the fibula, the ligament has been left out of the attachments illustration for purposes of simplification. Attachment sites on the plantar surface of the foot are shown at upper right.

The muscles of the leg are arranged into anterior-lateral, lateral, and posterior compartments. The bony ridge (anterior margin) of the tibia creates two oblique surfaces, the anterolateral of which relates to the anterior leg muscles; the anteromedial surface is bony (ouch!) and devoid of muscle. The lateral compartment fibular muscles largely arise from the fibula and the interosseous ligament between the tibia and fibula.

ANTERIOR LEG

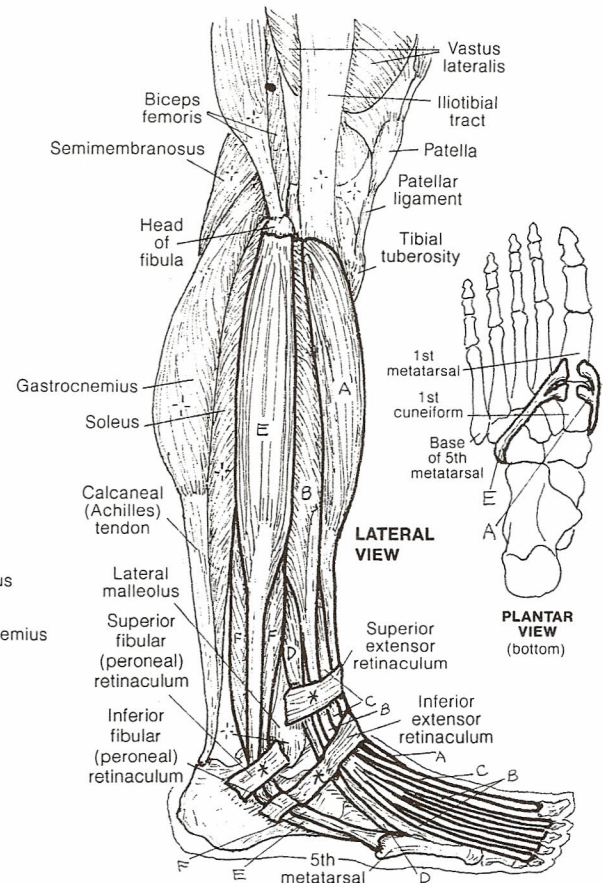
TIBIALIS ANTERIOR
EXTENSOR DIGITORUM LONGUS
EXTENSOR HALLUCIS LONGUS
FIBULARIS TERTIUS



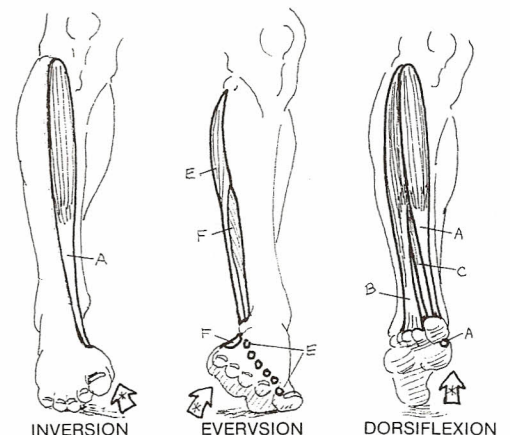
All of the anterior leg muscles are dorsiflexors (extensors) of the ankle; *extensors hallucis* and *digitorum longus* are toe extensors; *tibialis anterior* is an invertor of the subtalar joints as well, and *fibularis tertius* (the 5th tendon of *extensor digitorum*) is an evertor. Due to rotation of the lower limb during embryonic development, these extensors are anterior to the bones in the anatomical position (unlike the upper limb wrist extensors). *Tibialis anterior* is particularly helpful in lifting the foot up during the swing phase of walking to avoid striking the toes.

LATERAL LEG

FIBULARIS LONGUS
FIBULARIS BREVIS



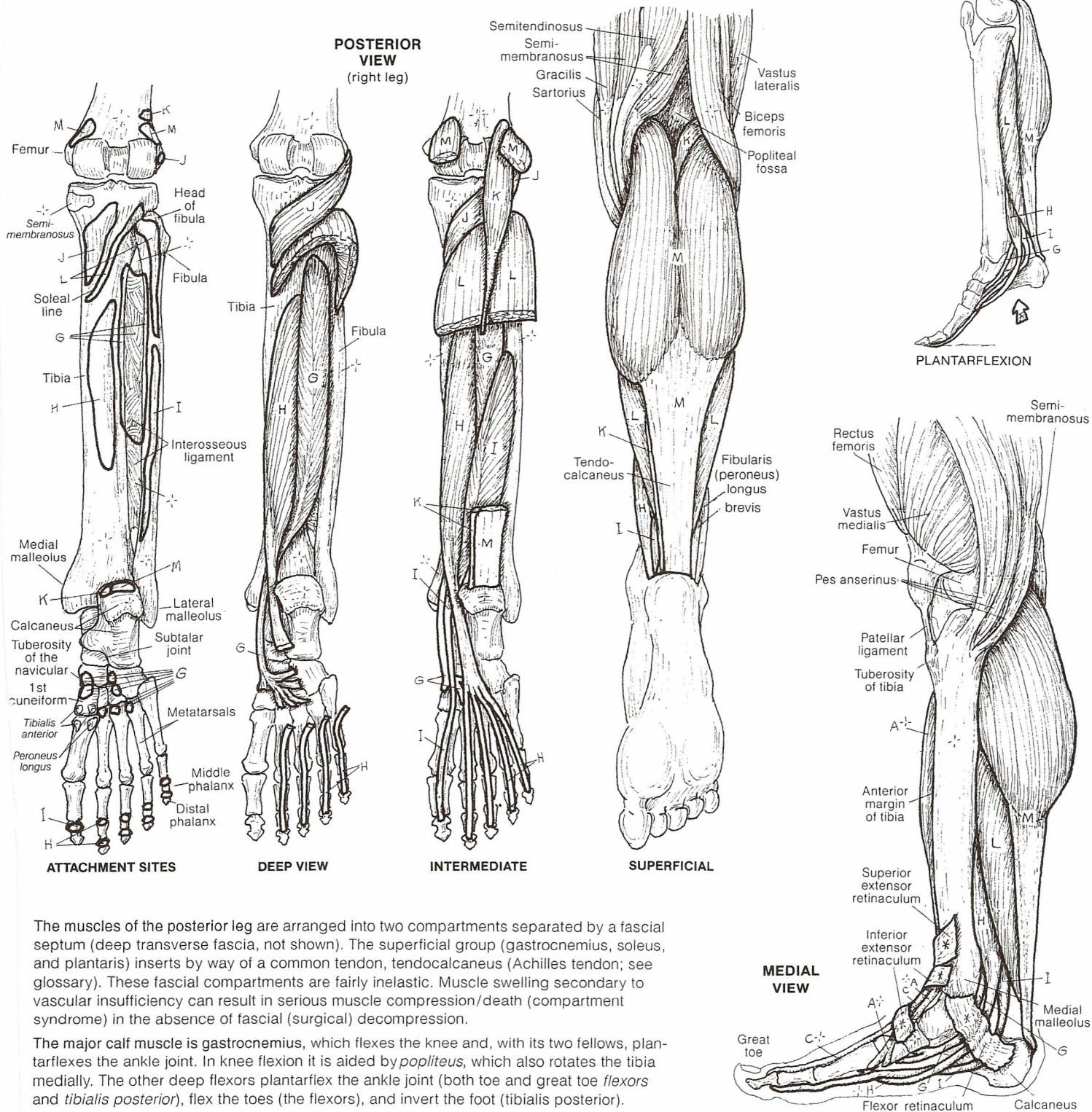
The fibular (peroneal) muscles are principally evertors of the foot, and are especially active during plantar flexion, as in walking on the toes or pushing off with the great toe. *Fibularis tertius* arises in the fibular compartment but is actually part of *extensor digitorum*.



MUSCLES OF THE POSTERIOR LEG

TIBIALIS POSTERIOR:
FLEXOR DIGITORUM LONGUS_H
FLEXOR HALLUCIS LONGUS_I
POPLITEUS_J
PLANTARIS_K
SOLEUS_L
GASTROCNEMIUS_M

CN: The muscles to be colored on this plate are labeled G–M; any other letter label found here (A–F from Pl. 65; N–Y from Pl. 67) is for identification only, and those muscles should be left uncolored. You may repeat colors used for muscles on Plate 57 on this and/or the next plate. (1) Color one muscle at a time in each of the posterior views. Note that the plantaris (K), the soleus (L), and the gastrocnemius (M) all insert into the same tendon (tendocalcaneus), which receives the color M. (2) Color the upper and lower medial views.



The muscles of the posterior leg are arranged into two compartments separated by a fascial septum (deep transverse fascia, not shown). The superficial group (gastrocnemius, soleus, and plantaris) inserts by way of a common tendon, tendocalcaneus (Achilles tendon; see glossary). These fascial compartments are fairly inelastic. Muscle swelling secondary to vascular insufficiency can result in serious muscle compression/death (compartment syndrome) in the absence of fascial (surgical) decompression.

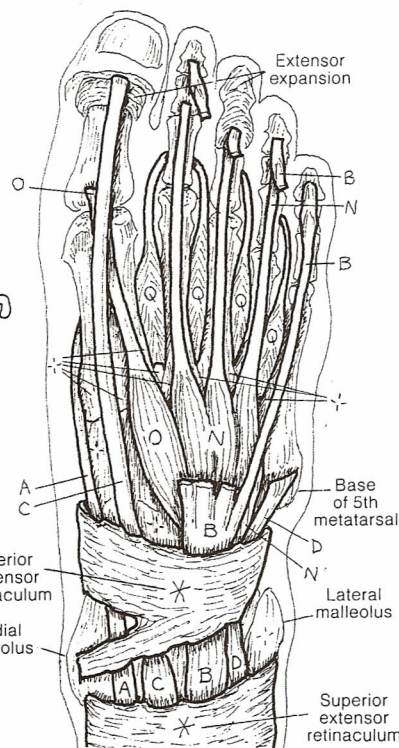
The major calf muscle is gastrocnemius, which flexes the knee and, with its two fellows, plantarflexes the ankle joint. In knee flexion it is aided by *popliteus*, which also rotates the tibia medially. The other deep flexors plantarflex the ankle joint (both toe and great toe flexors and *tibialis posterior*), flex the toes (the flexors), and invert the foot (*tibialis posterior*).

CN: Feel free to use the colors used for the letter labels on plates 65 and 66. Those letters are presented here for identification, and the muscles they refer to are not meant to be colored. Also note that plantar surface attachment sites for those extrinsic foot muscles have been omitted in the illustration of the fourth layer but can be found on the two preceding plates. (1) Begin with the fourth layer and complete each illustration before going on to the next.

The dorsal intrinsic muscles of the foot (those that arise and insert within the dorsum of the foot) are limited to two *small extensors* of the toes, shown at right, most of the extensor function being derived from extrinsic extensors.

The third layer of muscles acts on the great toe (hallux) and 5th digit (digiti minimi). The second layer includes the *quadratus plantae*, inserting into the lateral border of the common tendon (H) of flexor digitorum longus (FDL). It assists that muscle in flexion of the toes. The *lumbricals* arise from the individual tendons of FDL and insert into the medial aspect of the extensor expansion (dorsal aspect). They flex the MP joints and extend the IP joints of toes 2–5 via the extensor expansion.

The superficial (first) layer consists of the *abductors* of the 1st and 5th digits and the *flexor digitorum brevis*. The plantar muscles are covered by the thickened deep fascia of the sole, the plantar aponeurosis, extending from calcaneus to the fibrous sheath of the flexor tendons.



EXTENSOR DIGITORUM BREVIS_N

EXTENSOR
HALLUCIS
BREVIS.

**FLEX. HALLUCIS
BREVIS_R**

ADDUCTOR HALLUCIS_s

FLEX. DIGITI
MINIMI BREV.T

3 PLANTAR INTEROSSEI.

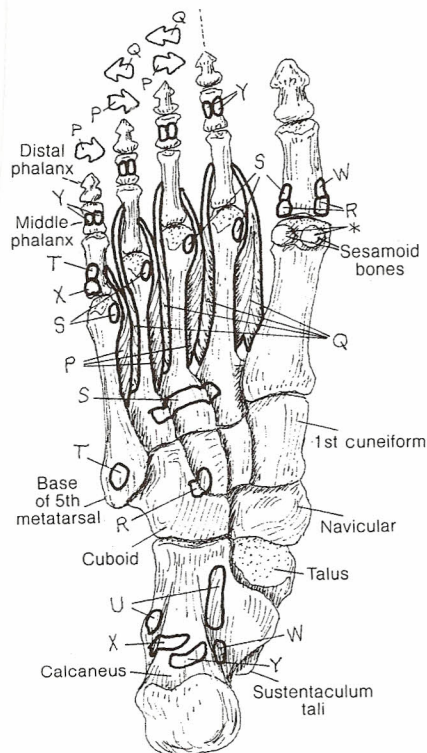
4 DORSAL INTEROSSEI.

QUADRATUS
PLANTAE,
4 LUMBRICALS.

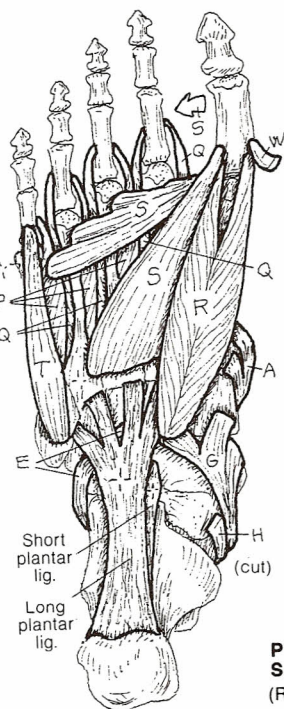
ABDUCTOR HALLUCIS_w

ABDUCTOR
DIGITI
MINIMI_x

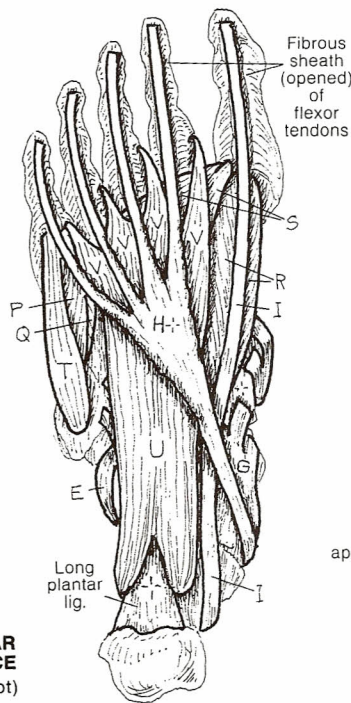
FLEX. DIGITOR.
BREVIS_Y



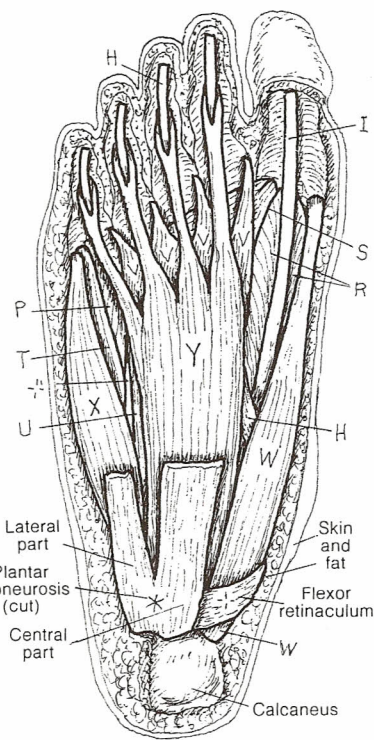
FOURTH LAYER



THIRD LAYER



SECOND LAYER



FIRST LAYER (superficial)